

### REMARKS

The examiner considered applicant's prior amendment reciting "tangibly storing" as adding new matter. Applicant notes that *ibis verbis* support of terms used in claims is not required in a patent specification. One of ordinary skill in the art would appreciate that when data is stored in memory or storage it is stored in a tangible form, e.g., having actual form and substance as a series of signals stored on the medium. Nevertheless, the term is redundant and thus Applicant has deleted the term.

Applicant has amended claims 35, 43 and 52 to overcome the objections of these claims for use of the phrase "for use in for use." Applicant does not see this phrase in claims 1 or 14. Applicant has corrected the punctuation in claim 8 and has amended claim 12 to recite "gateway."

The examiner rejected claims 14 and 52 under 35 U.S.C. 101 as being directed to non-statutory subject matter.

Claims 14 and 52, as amended are directed to statutory subject matter. Claim 14 for instance recites searching a database for gateway cities corresponding to the determined interior cities appearing in the arbitraries. Claim 14 thus does not claim an abstract idea. It positively claims a method of constructing a fare in a computer system. The claim also recites storing the constructed fares in memory or the persistent storage device of the computer system. According to the elements recited in the claim, the claim cannot be accomplished by "pen and paper and/or the mind of the user" as argued by the examiner.

Claim 14 does not lack a claimed practical application. Claim 14 recites functionality required to carry out the functions of the claimed invention in a concrete and tangible manner. Thus, the examiner's reliance on *In re Beauregard* and *State Street* is misplaced.

Claim 52 is directed to a method \*\*\* executed in a computer system. Claim 52 includes accessing a first hash table structure stored in computer memory \*\*\* accessing a second hash table structure stored in computer memory \*\*\* and storing the constructed fares in a computer memory or persistent storage. Claim 52 positively recites statutory subject matter.

Accordingly, the rejection of these claims under 35 U.S.C. 101 as directed to non-statutory subject matter should be removed.

The examiner rejected claims 1-46 and 52-53 under 35 U.S.C. 102(e), as being anticipated by "Gardner," in view of Applicant's Background of the invention.

At the outset, Applicant notes that a rejection of a claim as being anticipated must be made with regard to a single reference that contains all of the limitations of the claim arranged, as in the claim. Applicant also notes that the examiner has not used Applicant's Background to demonstrate inherency of any feature described in Gardner, but rather uses applicant's specification to define a term used by the reference, in a contrary manner as used by Applicant.

On page 1, Applicant describes:

The fare construction process solves this problem by providing a mechanism to "extend" a published fare with add-ons also called arbitraries, in order to derive prices to minor cities. An arbitrary, like a published fare, lists two cities. However, unlike cities in a published fare (which establish a bidirectional market), the cities in an arbitrary are ordered: the first is the gateway (or major) city, and the second is the interior (or minor) city.

It is clear that Applicant's specification distinguishes between a fare and an add-on or arbitrary. The examiner in rejecting Applicant's claims however equates a fare and an arbitrary despite the clear distinction in applicant's specification that the arbitrary extends a published fare and is represented as an ordered set of two cities, whereas a published fare includes an amount for travel between two cities to provide a bi-directional market. Accordingly, the rejection is an improper anticipation rejection.

Applicant's claim 1 calls for \*\*\* determining interior cities that appear with gateway cities in arbitraries for an airline, the arbitraries being published amounts and an order set of two cities that extend published fares that include an amount for travel between two cities to provide a bi-directional market.

The examiner considers that Gardner's discussion of unpublished fares taught this element. However, unpublished fares are not the same as arbitraries or add-ons. Rather, as

Applicant points out in the Background on page 2 lines "One approach used to fare construction is to use a list of constructed fares called "The Unpublished Fares Product" that is available from Airline Tariff Publishing Company (ATPCO)." Applicant seeks to provide a better technique to produce such constructed fares. Gardner on the other hand, merely accesses these unpublished fares and uses them with published fares as possible fare components, in a similar manner that Gardner can provide fare components using published fares. Gardner does not describe or suggest any technique to produce the unpublished fares.

Claim 1 requires preprocessing by determining interior cities that appear with gateway cities in arbitraries for an airline. Gardner does not perform this preprocessing. Rather, Gardner merely discloses:

[0098] For each component identified, pricing services driver 180 typically will seek to determine the unpublished fare for the component. This process typically involves retrieving the agreements and calling unpublished footnote retrieval/validation module 190. After doing this, the unpublished fare is retrieved using unpublished fare retrieval/validation module 194. Next, the published routings retrieval/validation module 196 is called. Additionally, the process returns an array of unpublished fares.

Gardner also neither describes nor suggests searching a database having published fares for gateway cities corresponding to the determined interior cities appearing in the arbitraries. The examiner considers this taught by paragraphs 95-97. However, Gardner does not teach this limitation. Rather, at paragraphs 95-97, Gardner discusses forming fare components.

\*\*\* [0096] Fare component identification module 184 identifies possible trip components within an itinerary. This is done by grouping the itinerary segments together in different ways to form possible fare components. Furthermore, fare component identification module 184 prevents illogical components from being generated.

[0097] Trip construction identification module 186 identifies all possible combinations of trip constructions that, when

combined, can be used to price all specified travel. This process will produce pricing entities (not shown), each describing a different combination of logical trip constructions that may produce the lowest ticket price.

As is apparent from the excerpts of Gardner, Gardner does not produce constructed fares. Therefore, Gardner does not suggest applying an arbitrary corresponding to one of the interior cities to a published fare involving one of the gateway cities that corresponds to the determined interior cities appearing in the arbitraries to produce a constructed fare. Gardner in paragraphs 0095-0097 is merely determining fare components.

Claims 2-13 add distinguishing features that are not shown by the reference.

Claim 2 for instance recites that determining interior cities involves accessing a hash table indexed by an airline, interior-city pair to return a list of gateway cities for which an airline has arbitraries that specify the interior city. No such teaching is suggested in the reference.

Similarly claim 4 limits the action of searching for gateway cities by accessing a hash table indexed by an airline-gateway pair to return a list of gateway cities that an airline publishes fares from the determined gateway to another gateway city. No such teaching is suggested in the reference.

Claim 5 combines the novel elements of claims 2 and 4 and thus further distinguishes.

Claims 3 and 6 recite that accessing the hash table returns the lists in constant time, a feature not suggest by the reference.

Claim 9 adds an additional feature that is not suggested by the reference. Claim 9 tests entries by determining if an entry in a construction table was memoized before accessing the construction table. If the entry was memoized, an answer is retrieved from a store of memoized entries to apply to the constructed fare. This applies a processing short cut to further improve computation efficiency and is not suggested by the reference.

Claim 11 recites processing for determining a second set of interior cities that appear with a second gateway city in the published fare for the airline and applying an arbitrary that extends the published fare to a city from the second set of interior cities to produce a three component constructed fare.

Claim 12 recites to perform the method over all determined interior cities and all gateway cities that correspond to the determined interior cities appearing in the arbitraries to produce plural constructed fares.

For at least these reasons claims 1-13 distinguish over the reference.

Claim 14 likewise distinguishes over the reference. Claim 14 recites determining interior cities that appear with gateway cities in arbitraries for the particular airline, arbitraries being published amounts and an ordered set of two cities that extend published fares that include an amount for travel between two cities to provide a bi-directional market, searching for gateway cities corresponding to the determined interior cities appearing in the arbitraries; and applying arbitraries corresponding to the determined interior cities to published fares involving the gateway cities that corresponds to the determined interior cities appearing in the arbitraries to produce the set of constructed fares for the airline. At least these features of claim 14, and its dependent claims are neither described nor suggested by the reference generally for the reasons discussed above.

Claim 22 recites similar limitations as claims 1 and 14 and with its dependent claims are neither described nor suggested by the reference generally for the reasons discussed above.

Claim 35 is a computer program product claim reciting generally analogous features and with its dependent claims are neither described nor suggested by the reference generally for the reasons discussed above. Claim 43 is directed to a computer system and is allowable at least for the reasons discussed above.

Claim 52 is distinct over the reference, since the reference neither describes nor suggests accessing a first hash table by airline interior city pair to return a list of gateway cities for which an airline has arbitraries that specify the interior city,... accessing a second hash table by airline gateway pair to return a second list of gateway cities that an airline publishes fares from to determine a gateway to another gateway city and applying the first arbitraries from the first hash table to the published fares from the second hash table to return a list of potential constructed fares.

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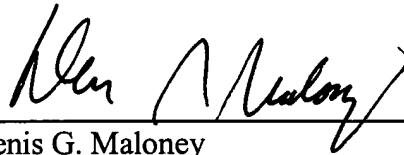
The undersigned has made an inquiry with the Applicant as to the existence of any art from the same ATPCO organization that authored the other cited references. The Applicant is not aware of any other references from ATPCO earlier than 1994 or between 1994 and 2001. Applicant requests that the examiner set out her reasons why she believes the references to exist.

Enclosed is a \$450 check for the Petition for Extension of Time fee. Please apply any other charges or credits to deposit account 06-1050.

Respectfully submitted,

Date: \_\_\_\_\_

3/30/01



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